

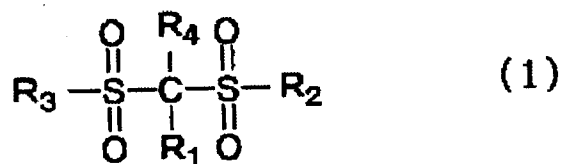
**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

**1-12. (canceled)**

**13. (currently amended)** An additive for an electrolyte solution for an electrochemical device, said additive comprising a compound represented by the following formula:



wherein

R<sub>1</sub> and R<sub>4</sub> are each independently selected from the group consisting of a hydrogen atom, a substituted or unsubstituted alkyl group having 1 to 5 carbon atoms, a substituted or unsubstituted alkoxy group having 1 to 5 carbon atoms, a substituted or unsubstituted fluoroalkyl group having 1 to 5 carbon atoms, a polyfluoroalkyl group having 1 to 5 carbon atoms, -SO<sub>2</sub>X<sub>1</sub>, wherein X<sub>1</sub> is a substituted or unsubstituted alkyl group having 1 to 5 carbon atoms, -SY<sub>1</sub>, wherein Y<sub>1</sub> is a substituted or unsubstituted alkyl group having

1 to 5 carbon atoms,  $-\text{COZ}$ , wherein Z is a hydrogen atom or a substituted or unsubstituted alkyl group having 1 to 5 carbon atoms, and a halogen atom,

with the proviso that  $\text{R}_1$  cannot be a hydrogen atom when  $\text{R}_4$  is an alkyl group having 1 to 5 carbon atoms, and  $\text{R}_4$  cannot be a hydrogen atom when  $\text{R}_1$  is an alkyl group having 1 to 5 carbon atoms; ~~and~~

$\text{R}_2$  and  $\text{R}_3$  are each independently selected from the group consisting of an unsubstituted alkyl group having 1 to 5 carbon atoms, a substituted or unsubstituted alkoxy group having 1 to 5 carbon atoms, a substituted or unsubstituted phenoxy group, an unsubstituted fluoroalkyl group having 1 to 5 carbon atoms, a substituted or unsubstituted fluoroalkoxy group having 1 to 5 carbon atoms, a polyfluoroalkoxy group having 1 to 5 carbon atoms, a hydroxyl group, a halogen atom,  $-\text{NX}_2\text{X}_3$ , wherein  $\text{X}_2$  and  $\text{X}_3$  independently represent a hydrogen atom or a substituted or unsubstituted alkyl group having 1 to 5 carbon atoms, and  $-\text{NY}_2\text{CONY}_3\text{Y}_4$ , wherein  $\text{Y}_2$  to  $\text{Y}_4$  independently represent a hydrogen atom or a substituted or unsubstituted alkyl group having 1 to 5 carbon atoms; and

with the proviso that  $\text{R}_1$  and  $\text{R}_4$  cannot be a fluorine atom when  $\text{R}_2$  or  $\text{R}_3$  is the hydroxyl group or the halogen atom.

**14-16. (canceled)**